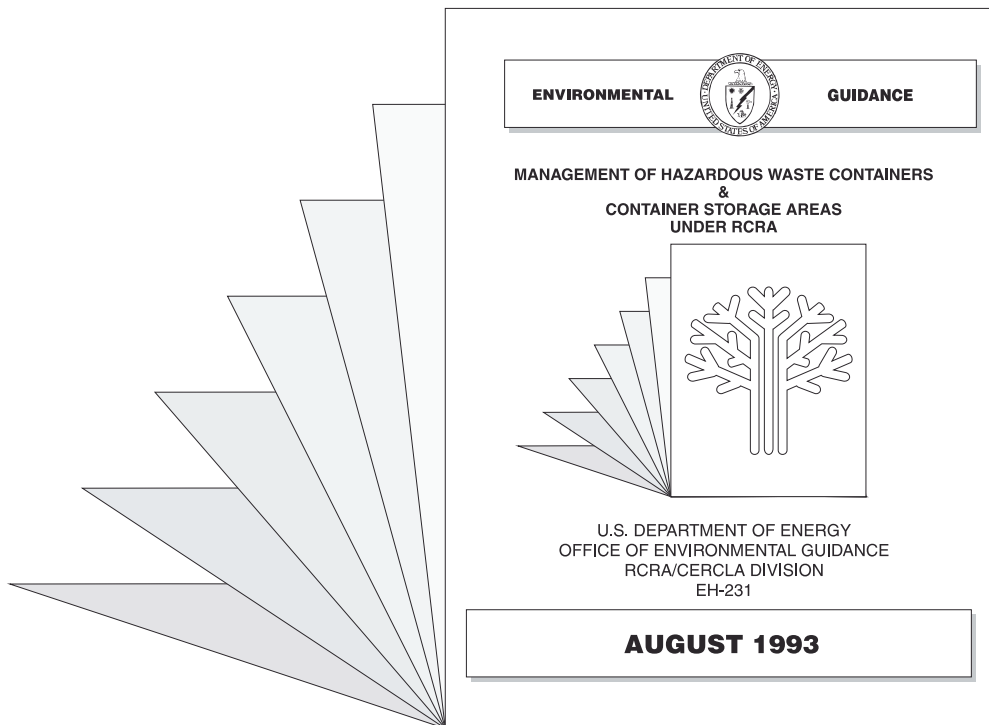


ENVIRONMENTAL



GUIDANCE

**MANAGEMENT OF HAZARDOUS WASTE CONTAINERS
&
CONTAINER STORAGE AREAS
UNDER RCRA**



**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENVIRONMENTAL GUIDANCE
RCRA/CERCLA DIVISION
EH-231**

AUGUST 1993

***MANAGEMENT OF RCRA HAZARDOUS WASTE
CONTAINERS AND CONTAINER STORAGE AREAS***

APRIL 1993 (*SUBPART CC UPDATE, SEPTEMBER 1999*)

Prepared by

**U.S. Department of Energy
Office of Environmental Guidance
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(EH-231)
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ABSTRACT

DOE's Office of Environmental Guidance, RCRA/CERCLA Division, has prepared this guidance document to assist waste management personnel in complying with the numerous and complex regulatory requirements associated with RCRA hazardous waste and radioactive mixed waste containers and container management areas. This document is designed using a systematic graphic approach that features detailed, step-by-step guidance and extensive references to additional relevant guidance materials. Diagrams, flowcharts, references, and overview graphics accompany the narrative descriptions to illustrate and highlight the topics being discussed. Step-by-step narrative is accompanied by flowchart graphics in an easy-to-follow, "roadmap" format.

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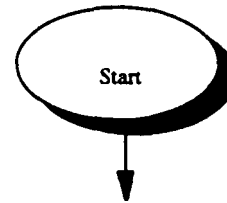
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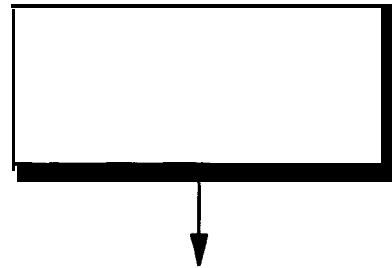
FLOWCHART SYMBOLS

This document as a graphical guidance document, utilizes flowcharts and other graphic techniques to accompany and illustrate the narrative descriptions. The flowcharts employ certain symbols, as highlighted below.

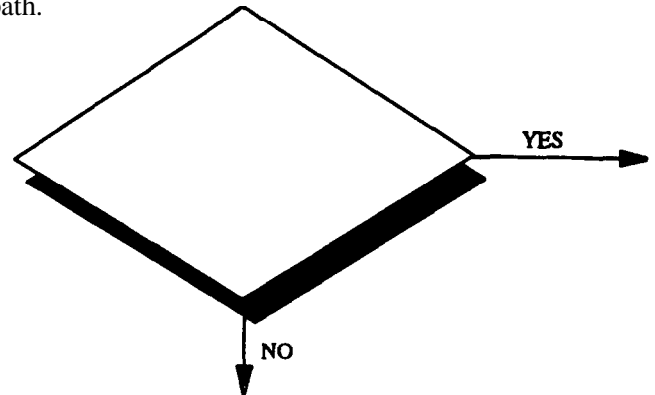
- **Ovals** represent the beginning of a new flowchart.



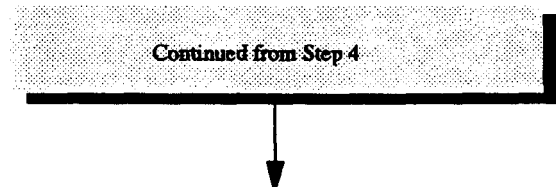
- **Unshaded Rectangles** indicate actions that must be completed. Follow the directions contained in the unshaded rectangles.



- **Diamonds** represent decision points. Answer the question (either Yes or No) contained in the diamond and follow the appropriate path.



- **Shaded Rectangles** contain directional statements (i.e., "continued on," "continued from," or "go to" statements). Follow any directional statements to or from the appropriate steps within the guidance.



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- **Note Boxes** contain additional guidance in performing the actions outlined in the flowchart.

Note:

- **Submodule Headings** are used to label sections of the flowchart.
- **Flowchart Step Numbers** are intended to assist DOE personnel in cross-referencing the flowchart and the accompanying narrative guidance.

GLOSSARY

The glossary contains brief definitions of some important terms used in this document. In some cases, these definitions are derived from very complicated regulatory terms. For more detailed definitions, consult the regulatory citations given in parentheses.

Active life The period from the initial receipt of hazardous waste at a facility until the Regional Administrator receives certification of final closure (40 CFR 260.10).

Acutely hazardous waste Hazardous wastes that have been identified as being extremely toxic and/or extremely reactive (261.33(e)).

Characteristic waste A solid waste defined as hazardous because it exhibits one or more of the following characteristics: ignitability, corrosivity, reactivity or toxicity (40 CFR 261 Subpart C).

Closure The process in which the owner/operator of a hazardous waste management facility discontinues active operation by treating, removing from the site, or disposing of on-site, all hazardous wastes in accordance with an approved closure plan (40 CFR 264 and 265 Subpart G).

Conditionally exempt small quantity generator A facility that generates less than 100 kg/month of hazardous waste and less than 1 kg/month of acutely hazardous waste is exempt from full regulation under Subtitle C, subject to certain conditions regarding the types, amounts, treatment and disposal of wastes (40 CFR 261.5).

Container Any portable device in which material is stored, transported, treated, disposed of, or otherwise handled (40 CFR 260.10).

Container storage area The area in which containers are stored (40 CFR 264 and 265 Subpart I).

Containment system A system of dikes, barriers, walls, drains, etc., designed to contain leaks and spills from containers. For containers holding liquids, this system must have sufficient capacity to contain ten percent of the volume of all containers or the volume of the largest container, whichever is greater (40 CFR 264.175).

Contingency plan A document describing an organized, planned, and coordinated course of action to be followed in case of a fire, explosion or release of hazardous waste constituents which could threaten human health or the environment (40 CFR 260.10).

Corrective action The process whereby owner/operators of hazardous waste treatment, storage, or disposal facilities (TSDFs) are required to detect and, if necessary, address releases of hazardous constituents from their facilities to environmental media (40 CFR 264.100 and 264.101).

Facility All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal units (e.g., one or more landfills, surface impoundments) (40 CFR 260.10).

Generator Any person, by site, whose process produces a hazardous waste or whose actions first cause a hazardous waste to become subject to regulation (40 CFR 260.10).

Hazardous waste A waste is considered hazardous if it is listed in Subpart D of Part 261 "Lists of Hazardous Wastes" or if it exhibits any of the following characteristics: (1) ignitability; (2) corrosivity; (3) reactivity; and (4) toxicity (40 CFR 261.3).

Interim status The period during which the owner/operator of an existing TSDF is treated as having been issued a RCRA permit even though a final permit determination has not been made (40 CFR 270.10).

Leachate Any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste (40 CFR 260.10).

Listed Waste A solid waste that is defined as hazardous because it is specifically listed in Subpart D of 40 CFR Part 261 (40 CFR 261 Subpart D).

Manifest An official EPA document (EPA Form 8700-22 and if necessary, continuation sheet EPA Form 8700-22A) containing information regarding the type, quantity and origin of hazardous waste that allows waste to be tracked from the point of its generation to the point of its ultimate disposal (40 CFR 260.10).

Permit An authorization, license or equivalent control document issued by EPA or a State allowing a TSDF to operate (40 CFR 270 Subpart A).

Placard Placards are placed on the outside of vehicles used in transporting containers of hazardous waste off-site. Placards identify and provide warning of the hazards associated with the waste (e.g., radioactive, corrosive, combustible, dangerous) (49 CFR 172 Subpart F).

Post-Closure The period following closure of a hazardous waste management facility during which the owner/operator must continue to secure the facility sufficiently to protect human health and the environment. The standard post-closure care period for hazardous waste is 30 years (40 CFR 264 and 265 Subpart G).

Regulated unit Any surface impoundment, waste pile, land treatment unit, or landfill that received hazardous waste after July 26, 1982 (40 CFR 264.90).

Satellite accumulation Accumulation of hazardous waste at the point of generation that does not exceed 55 gallons (40 CFR 262.34).

Solid waste Any garbage, refuse, sludge or other waste materials, *except*: domestic sewage and any mixture of other wastes that pass through a sewer system to a publicly owned treatment works, industrial wastewater discharges that are point source discharges subject to regulation under the amended Clean Water Act, irrigation return flows, source, special, nuclear, or byproduct materials defined by the Atomic Energy Act of 1954, and in situ mining materials (40 CFR 261.2).

Solid waste management unit (SWMU) Waste management units from which hazardous wastes or constituents may migrate, even if the unit was not intended for the management of hazardous waste, along with any areas that become contaminated as a result of routine and systematic releases of wastes (55 FR 30808).

Tank A stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of non-earthen material (e.g., wood, plastic, concrete, steel). (Note: This guidance manual applies only to containers, not tanks) (40 CFR 260.10).

Waste characterization A process in which the owner/operator of a TSDF, or possibly the generator, obtains a detailed chemical and physical analysis of the hazardous wastes to be handled at a facility (40 CFR 264.13 and 265.13).

INTRODUCTION

U.S. Department of Energy (DOE) facilities manage millions of gallons of hazardous and radioactive mixed waste in container storage areas. These storage areas and their associated containers must be managed in accordance with all applicable Federal, State, and local environmental regulations, including the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA establishes standards for hazardous waste from the time it is generated to the time of its ultimate disposal. These "cradle to grave" regulations are codified in Title 40 of the Code of Federal Regulations (CFR).

Specific RCRA regulations applicable to hazardous and radioactive mixed waste containers and container storage units are located in 40 CFR 264 Subpart I and 40 CFR 265 Subpart I for permitted and interim status facilities, respectively. Subpart I requirements for both permitted and interim status facilities contain provisions for: ensuring that containers are in good condition (e.g., not rusting, not containing any apparent structural defects, not leaking); container handling; inspections; containment system design and operation; compatible, reactive, or ignitable wastes; and closure. In addition to the unit-specific requirements, waste management personnel managing these facilities must comply with the general hazardous waste management practices contained in Subparts B through E of Parts 264 and 265 and general closure requirements of Parts 264 and 265 Subpart G. Waste management personnel also must be aware of RCRA procedures for identifying hazardous waste (40 CFR Part 261), requirements for generators and transporters of hazardous waste (Parts 262 and 263), as well as permitting requirements (Part 270).

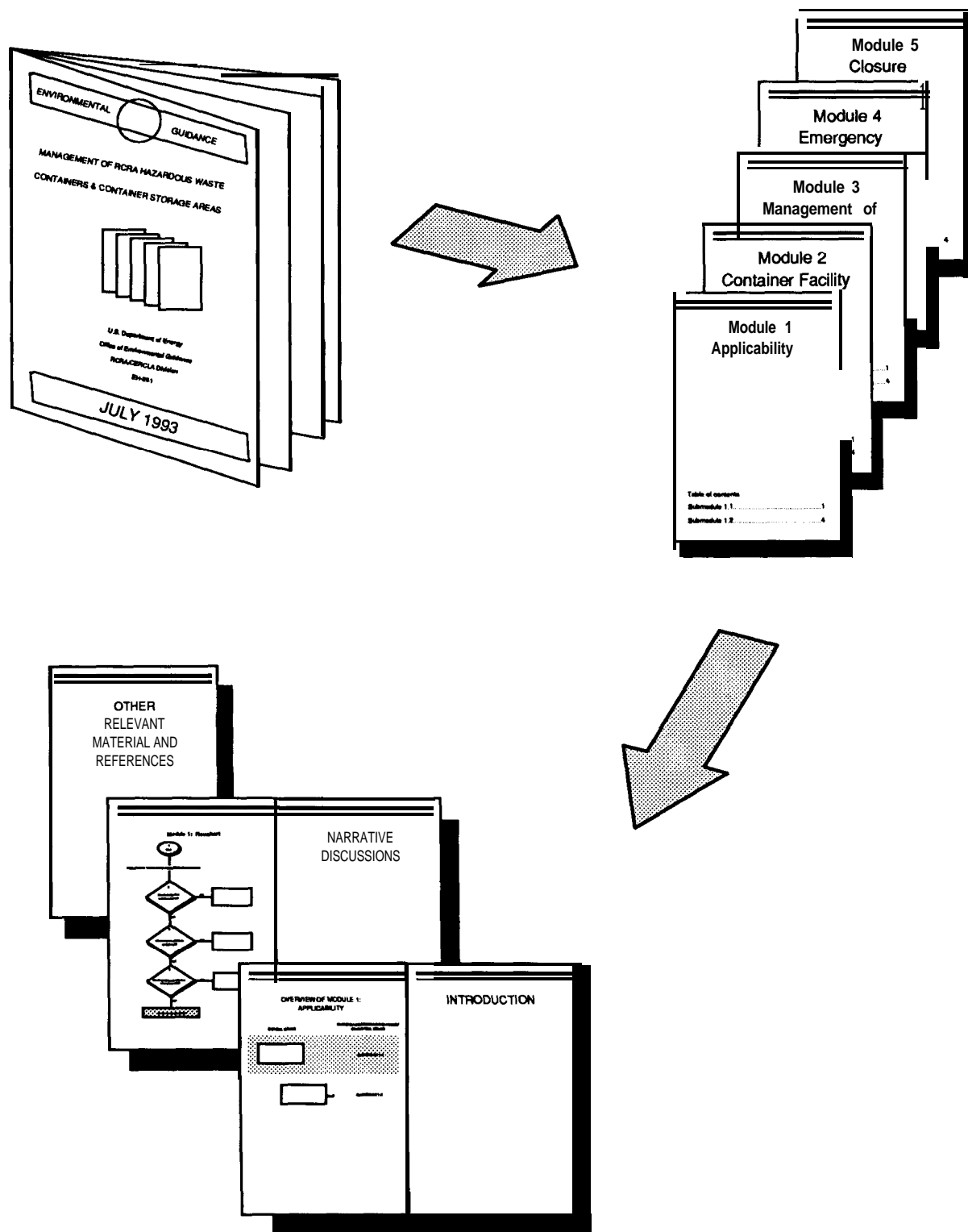
Regulations promulgated under RCRA, as well as DOE Orders, DOT and OSHA regulations, the Emergency Planning and Community Right-to-Know Act (EPCRA), and a host of State and local regulations all potentially affect operations at hazardous and radioactive mixed waste container storage areas.

To assist waste management and environmental oversight personnel in complying with these numerous and complex regulatory requirements, DOE's Office of Environmental Guidance, RCRA/CERCLA Division, has prepared this guidance document on management of RCRA hazardous and radioactive mixed waste container storage areas. The document is designed using a systematic graphic approach that features detailed, step-by-step guidance and extensive references to additional relevant guidance materials. Diagrams, flowcharts, references, and overview graphics accompany the narrative descriptions to illustrate and highlight the topics being discussed. The graphics (e.g., flowcharts) also accompany the step-by-step, narrative descriptions in an easy-to-follow, "roadmap" format.

HOW TO USE THIS GUIDANCE DOCUMENT

This document is composed of modules and submodules. Each module represents a major component of container storage facility requirements at DOE facilities. Each submodule discusses a particular aspect of these broad requirements. For example, the overall container management requirements of Module 3 are divided into submodules discussing issues such as inspections, compatibility, and manifesting. This document is designed so that each module and/or submodule can be used independently. For example, those responsible for or interested in training requirements could look solely at Submodule 3.5, "Personnel Training." Personnel should refer to other sections when necessary, but each submodule and module provide thorough and accurate guidance individually for the relevant regulations. The submodules will reference other submodules, when necessary, to ensure that waste management and environmental oversight personnel receive all pertinent information. This cross-referencing eliminates narrative redundancy, enables each submodule to act as a stand-alone document, and ensures that the information on a topic is thorough and complete.

OVERVIEW OF GRAPHIC GUIDANCE PACKAGE



PURPOSE OF THIS GRAPHIC GUIDANCE DOCUMENT

DOE should use this guidance document as:

- an overview of the regulations for RCRA hazardous and radioactive mixed waste container storage areas;
- a comprehensive step-by-step guidance for operating procedures of a container storage area, from design and construction standards to closure and corrective action requirements; and
- a quick, ready-reference guide for any specific topic concerning container storage area operation.

ADDITIONAL REQUIREMENTS

This guidance is intended to be used in addition to, not in lieu of, requirements in specific Federal facility agreements (FFAs), and Federal, State, and local regulations affecting container storage areas. Waste management and environmental oversight personnel should be aware that additional requirements may apply to their facilities. These additional requirements include:

- DOE Orders - Line management personnel are responsible for complying with all applicable DOE orders. Circumstances at specific DOE sites may trigger requirements in addition to those required by Federal container storage area requirements.
- applicable State and local requirements - Line management personnel are responsible for complying with applicable State requirements and are encouraged to cooperate fully with State and local authorities.
- regulatory change - EPA may expand or modify existing requirements. Line management personnel should verify that they are using the most up-to-date reference materials.
- Federal facility agreements - Line management personnel should review FFAs or other such agreements that may effect how container storage area requirements are implemented.

OVERVIEW OF MODULES

Module 1, "Applicability" - discusses the most basic elements of container management issues (i.e., what constitutes a container, and when is a container considered to be empty).

Module 2, "Container Facility Design and Construction" - describes requirements relevant to the container storage area, such as containment system construction and storage capacity, aisle spacing, security systems, and permitting standards.

Module 3, "Management of Containers" - describes requirements that are relevant to the containers themselves such as compatibility, inspections, waste handling, manifesting, labeling, marking, transportation issues.

Module 4, "Emergency Preparedness, Response, and Remediation" - addresses issues such as release detection and reporting requirements under RCRA and CERCLA, spill response, and corrective action that may or may not occur over the operating life of a container storage area.

Module 5, "Closure" - discusses requirements for ceasing operations at a container storage area.

STRUCTURE OF THE MODULES AND SUBMODULES

Each module consists of a table of contents, an overview graphic, and several submodules, in most cases. The overview graphic demonstrates how the module fits into the overall container and container area management process, and outlines the submodules, where applicable. Each submodule contains a flowchart, an accompanying narrative description of the requirements, and references to relevant regulations and materials. Several submodules also contain additional useful guidance materials (e.g., checklists, sample labels, manifests, and diagrams).

MODULE 1

APPLICABILITY

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Introduction to Module 1: Applicability

This module provides guidance on determining which Federal requirements apply to DOE facilities managing hazardous waste in containers and container storage areas. Line management personnel should use this module to:

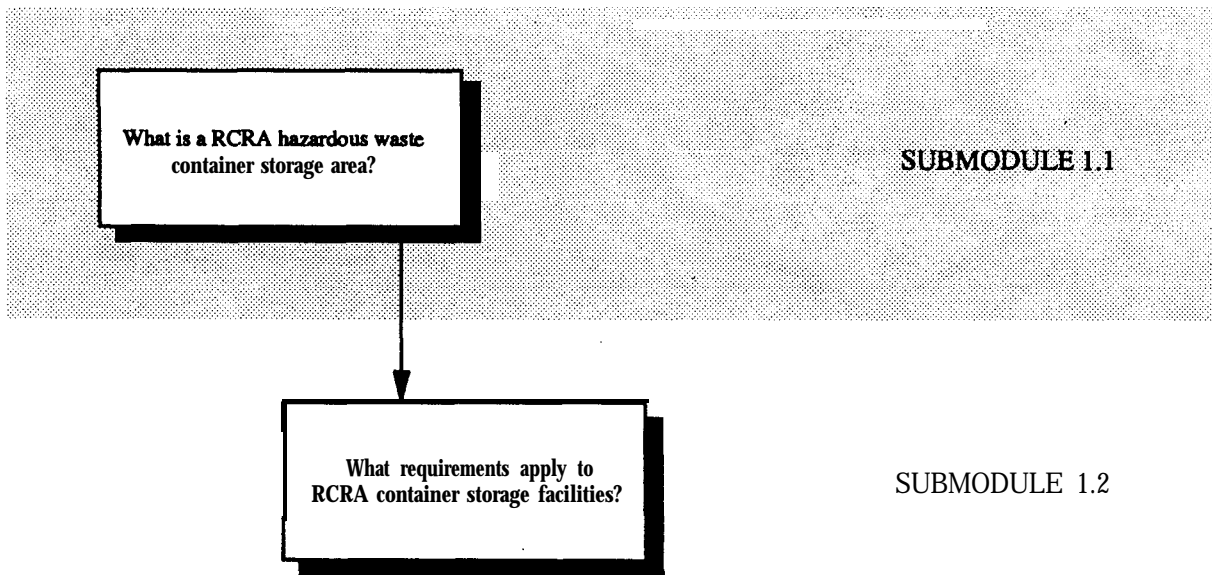
- identify what constitutes a container;
- determine the types of waste (e.g., hazardous and radioactive mixed waste) subject to RCRA requirements and those subject to other requirements (e.g., medical waste);
- determine whether or not a container is empty and thus exempt from regulation;
- understand the impacts of applicable requirements on the quantity of waste accumulated and accumulation time; and
- understand the effects of State authorization and permitting status on regulation and management of container storage areas.

The following flowchart and accompanying narrative discussion guide the reader step-by-step through the applicable requirements for container storage areas.

OVERVIEW OF MODULE 1: APPLICABILITY

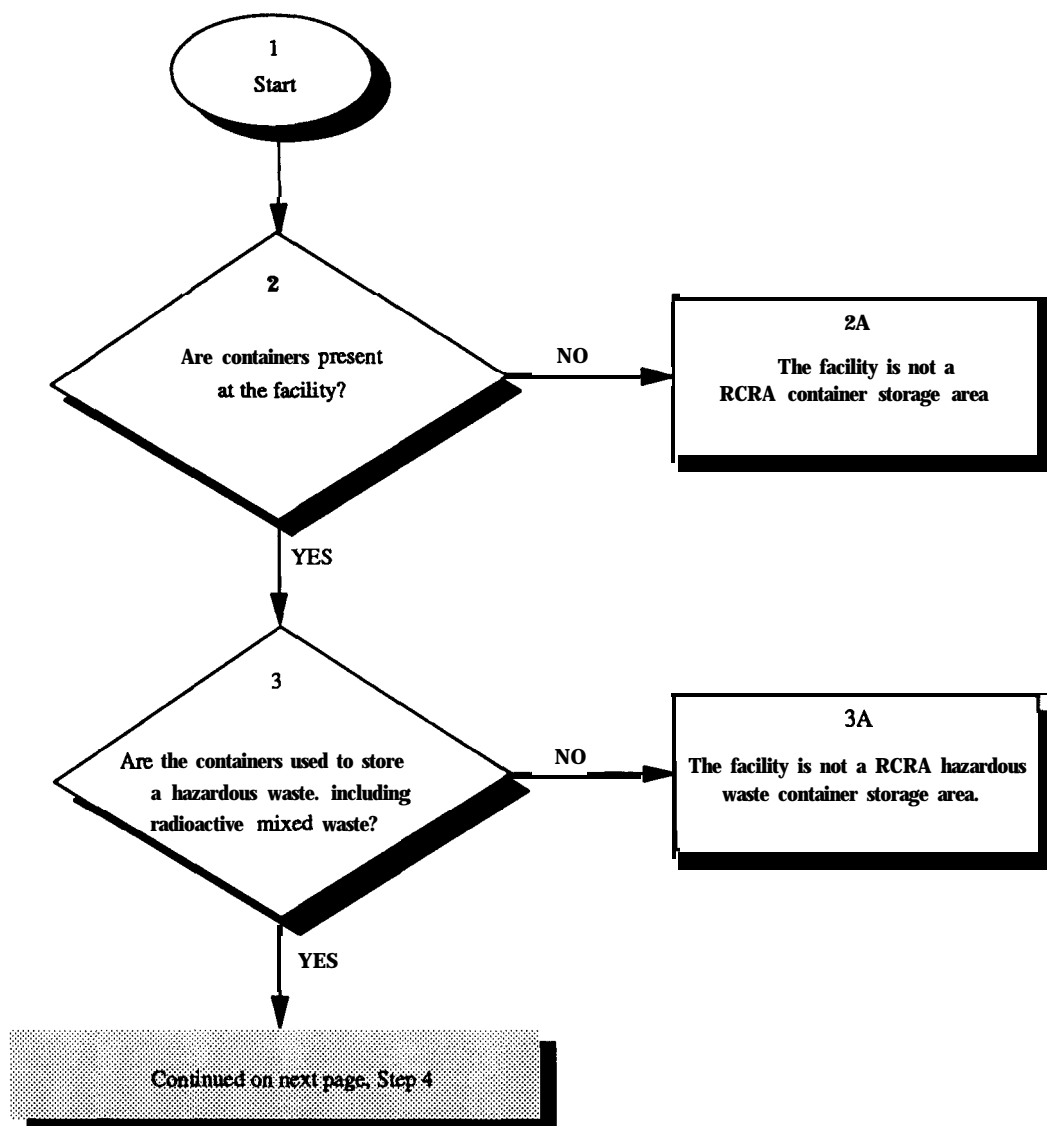
CRITICAL ISSUES

SUBMODULES CONTAINING GUIDANCE
ON CRITICAL ISSUES



Module 1: Flowchart

SUBMODULE I.1: WHAT IS A RCRA HAZARDOUS WASTE CONTAINER STORAGE AREA?



SUBMODULE 1.1: WHAT IS A RCRA HAZARDOUS WASTE CONTAINER STORAGE AREA?

Step 1 Start.

Step 2 A container is defined as "any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled" (40 CFR 260.10). According to the EPA RCRA Hotline (703-412-9810), mobility determines what constitutes a container. For example, a wheeled 1,000 gallon tank initially used to accumulate waste that is later moved to transfer the waste to a storage unit is a container. However, if the tank were mounted on legs and affixed to the ground, it would be considered a tank, not a container. The most common types of container used by waste management personnel are 55 gallon drums or barrels. Other examples of containers include 5 gallon carboys, retention tanks, overpack or salvage drums, and wood and metal boxes of assorted sizes.

Step 2A This document provides guidance on areas used to store or accumulate RCRA hazardous waste in containers. It does not discuss specific requirements that do not pertain to RCRA hazardous waste containers or container storage areas.

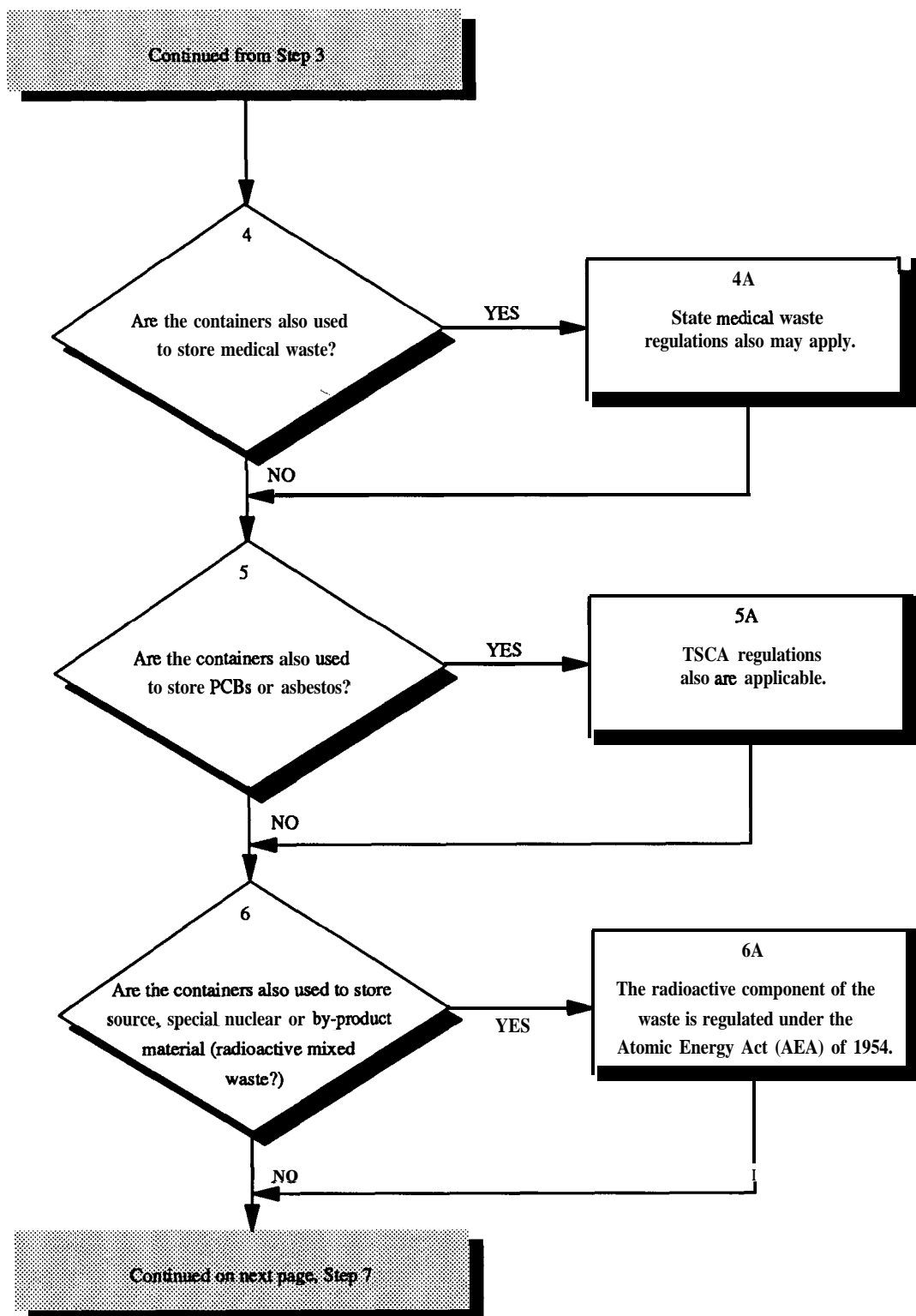
Step 3 Waste management personnel must next determine, using a two-step process, whether the waste being handled in a container is a hazardous waste. First, they must determine whether it is a solid waste. Note that substances such as raw materials and products that are not defined as solid waste (because, for example, they have not been thrown away, discarded or served their intended purpose) are not subject to RCRA requirements, even if they are stored in a container. Other materials excluded from regulation under RCRA because they are not defined as solid waste include (40 CFR 261.4(a)):

- domestic sewage;
- Clean Water Act point source discharge;
- source, special nuclear, or by-product material (Note: if these radioactive materials are mixed with hazardous waste, the hazardous component is subject to regulation under RCRA Subtitle C);
- irrigation return flow; and
- in-situ mining waste.

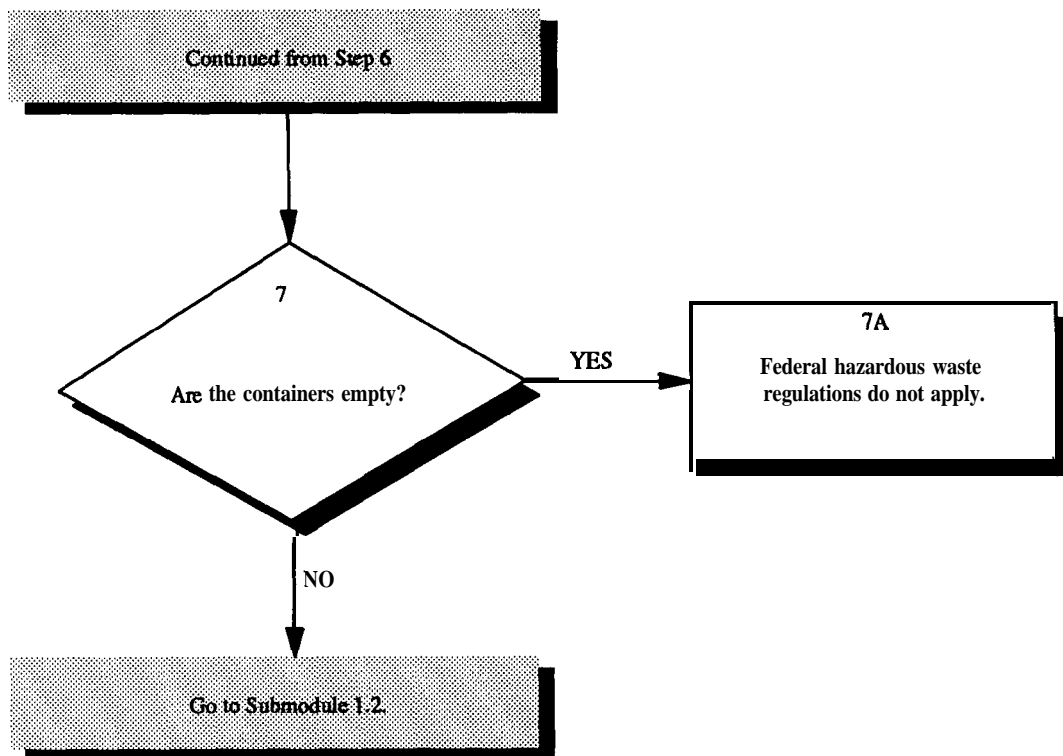
Guidance on determining whether a material is a solid waste can be found in 40 CFR 261.2. EH-413 Automated Guidance addressing the definition of solid and hazardous waste is titled *RCRA Definitions of Solid and Hazardous Wastes* (April 1997) and is Internet-accessible at <http://tis-nt.eh.doe.gov/oepa/programs/rcradef.html>

If waste management personnel determine that the material is a solid waste, then the next step is to determine whether the waste is a hazardous waste. A waste is considered hazardous if it is listed in Subpart D of Part 261 "Lists of Hazardous Wastes" or if it exhibits any of the following hazardous waste characteristics: (1) ignitability; (2) corrosivity; (3) reactivity; and (4) toxicity. Note that any residue remaining in a container or inner liner removed from a container that held any commercial chemical product identified in 40 CFR 261.33(e) or (f) becomes a hazardous waste when discarded, unless the container is defined as empty in 40 CFR 261.7(b).

Step 3A If waste management personnel determine that the waste is not hazardous, the requirements outlined in the remainder of this document are not applicable.



Step 4	EPA currently lists seven classes of medical waste. These are: (1) cultures and stocks (e.g., culture dishes, swabs, infectious agents); (2) human pathological wastes (e.g., body parts); (3) human blood and blood products; (4) used sharps (i.e., needles, syringes, scalpel blades); (5) animal wastes (e.g., carcasses, body parts, bedding); (6) isolation wastes (e.g., materials contaminated by humans isolated to protect others from highly communicable diseases); and (7) unused sharps (54 <u>FR</u> 12326).
Step 4A	<p>Primary responsibility for regulation of medical wastes lies with the States. Waste management personnel should consult appropriate State regulations. On November 1, 1988, the Medical Waste Tracking Act (MWTa) was signed into law. MWTa required the EPA to establish a two-year demonstration program for tracking medical wastes generated in States subject to the demonstration program. Information regarding EPA's two-year demonstration program for medical wastes can be found in 54 <u>FR</u> 12326, March 14, 1989, or in the following:</p> <ul style="list-style-type: none">• <i>Managing and Tracking Medical Wastes - A Guide to the Federal Program for Generators</i>, U.S. Environmental Protection Agency, EPA 530-SW-89-021, September 1989;• <i>Managing and Tracking Medical Wastes - A Guide to the Federal Program for Treatment, Destruction, and Disposal Facilities</i>, U.S. Environmental Protection Agency, EPA 530-SW-989-023, September 1989; and• <i>Managing and Tracking Medical Wastes - A Guide to the Federal Program for Transporters</i>, U.S. Environmental Protection Agency, EPA 530-SW-89-022, September 1989.
Step 5	PCB wastes and asbestos are regulated under the Toxic Substances Control Act (TSCA) and are defined in 40 CFR 761 Subpart A and 40 CFR 763 Subpart D, respectively.
Step 5A	This guidance document does not discuss specific requirements applicable to PCBs or asbestos. Consult <i>PCB Manifesting, Tracking, and Disposal Requirements</i> , U. S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, Information Brief EH-231-001/1190 (November 1990).
Step 6	The hazardous component of radioactive mixed wastes are subject to RCRA as well as Atomic Energy Act (AEA) requirements. Containers of radioactive mixed waste at DOE facilities must be managed in accordance with all applicable requirements. That is, the radioactive component is subject to the AEA, while the hazardous component is subject to RCRA. Radioactive mixed waste must also meet the guidelines established in DOE Order 5400.3 <i>Hazardous and Radioactive Mixed Waste Programs</i> .
Step 6A	The radioactive component of radioactive mixed waste is regulated under the authority of the AEA of 1954. The management requirements for high-level, transuranic, and low-level radioactive waste at DOE facilities are specified in DOE Order 5820.2A <i>Radioactive Waste Management</i> . Other DOE Orders relevant to radioactive waste include 5480.11 <i>Radiation Protection for Occupational Workers</i> and 5400.5 <i>Radiation Protection of the Public and the Environment</i> . Note that radioactive waste is not defined as radioactive mixed waste subject to RCRA unless it exhibits a hazardous waste characteristic or contains a listed RCRA hazardous waste. Containers holding radioactive waste that is not defined as radioactive mixed waste are therefore not subject to the RCRA requirements governing the generation, transport, and management of hazardous waste.



Step 7

A container that has held hazardous or radioactive mixed waste is considered "empty" (40 CFR 261.7(b)(1)) if:

- all hazardous or radioactive mixed wastes have been removed that can be removed using practices commonly employed and no more than 2.5 centimeters of residue remain on the bottom of the container or inner liner; or
- residual hazardous or radioactive mixed waste comprises:
 - no more than 3 percent, by weight, of the total capacity of the container or inner liner if the container is less than or equal to 110 gallons or
 - no more than 0.3 percent, by weight, if the container is greater than 110 gallons.

A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric pressure (40 CFR 261.7(b)(1)(iii)(B)(2).

A container or inner liner removed from a container that has held an acute hazardous waste (as listed in 261.31, 261.32, or 261.33(e)) is empty if:

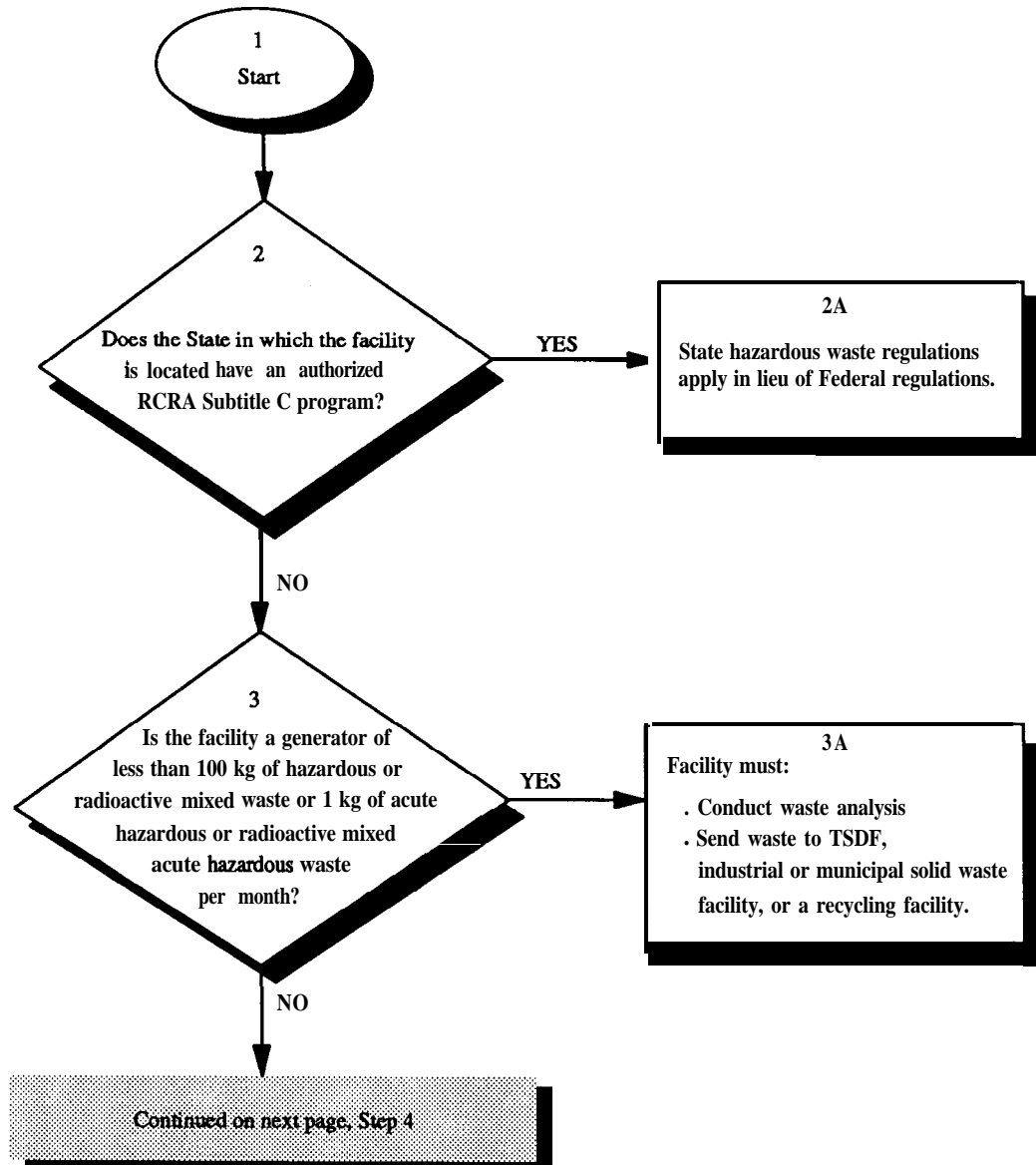
- the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
- the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
- the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

Step 7A

If the container is empty, Federal hazardous waste regulations do not apply. Note that the residue in a non-empty container (which held a commercial chemical product or manufacturing chemical intermediate) may still be exempt from hazardous waste regulation if the residue is being beneficially used or reused, legitimately recycled or reclaimed, or being accumulated prior to such use, re-use, recycling, or reclamation. For example, the residue would not be considered a hazardous waste if the residue remains in the container and the container is re-used to store the same commercial chemical product or manufacturing chemical intermediate it previously held. (See *Definitions of Solid and Hazardous Wastes under RCRA*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, Graphic Guidance Document, (forthcoming) and *Requirements for the Recycling of Hazardous Wastes*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, RCRA Information Brief, EH-231-001/0990, September 1990 for additional information). Also note that EPA has developed a number of initiatives that may affect the definitions of solid and hazardous waste and the regulation of hazardous waste recycling.

Module 1: Flowchart

SUBMODULE 1.2: WHAT REQUIREMENTS APPLY TO RCRA CONTAINER STORAGE AREAS?



SUBMODULE 1.2: WHAT REQUIREMENTS APPLY TO RCRA CONTAINER STORAGE AREAS?

Step 1 Start.

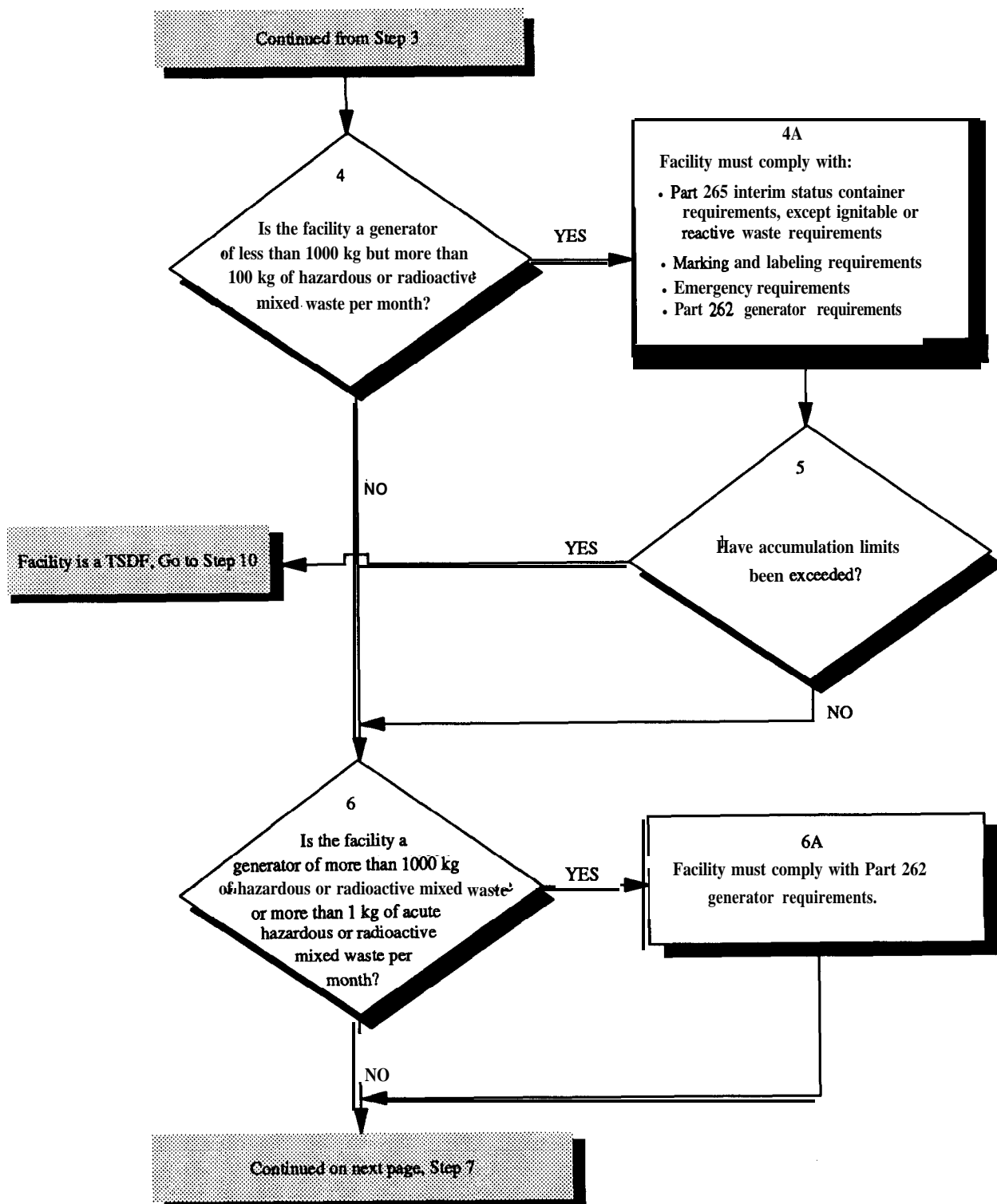
Step 2 DOE container storage areas operating in States without approved RCRA programs should follow all of the applicable treatment, storage, and disposal requirements detailed in this guidance. Note that States may not be authorized for every aspect of RCRA (e.g., corrective action, radioactive mixed waste, etc.). The authorization status of a State may be ascertained by contacting the appropriate EPA Regional Office.

Step 2A DOE container storage areas in States with authorized RCRA hazardous waste programs must meet the State's requirements for treatment, storage, and disposal facilities in lieu of Federal requirements. Authorized States must have programs that are at least as stringent as the Federal regulations. However, States are not precluded from adopting or enforcing requirements for TSDFs that are more stringent or more extensive than the Federal requirements. Facilities in States with approved programs may use this document as general guidance; however, line management and environmental oversight personnel should consult State regulations for precise information on State hazardous waste container requirements.

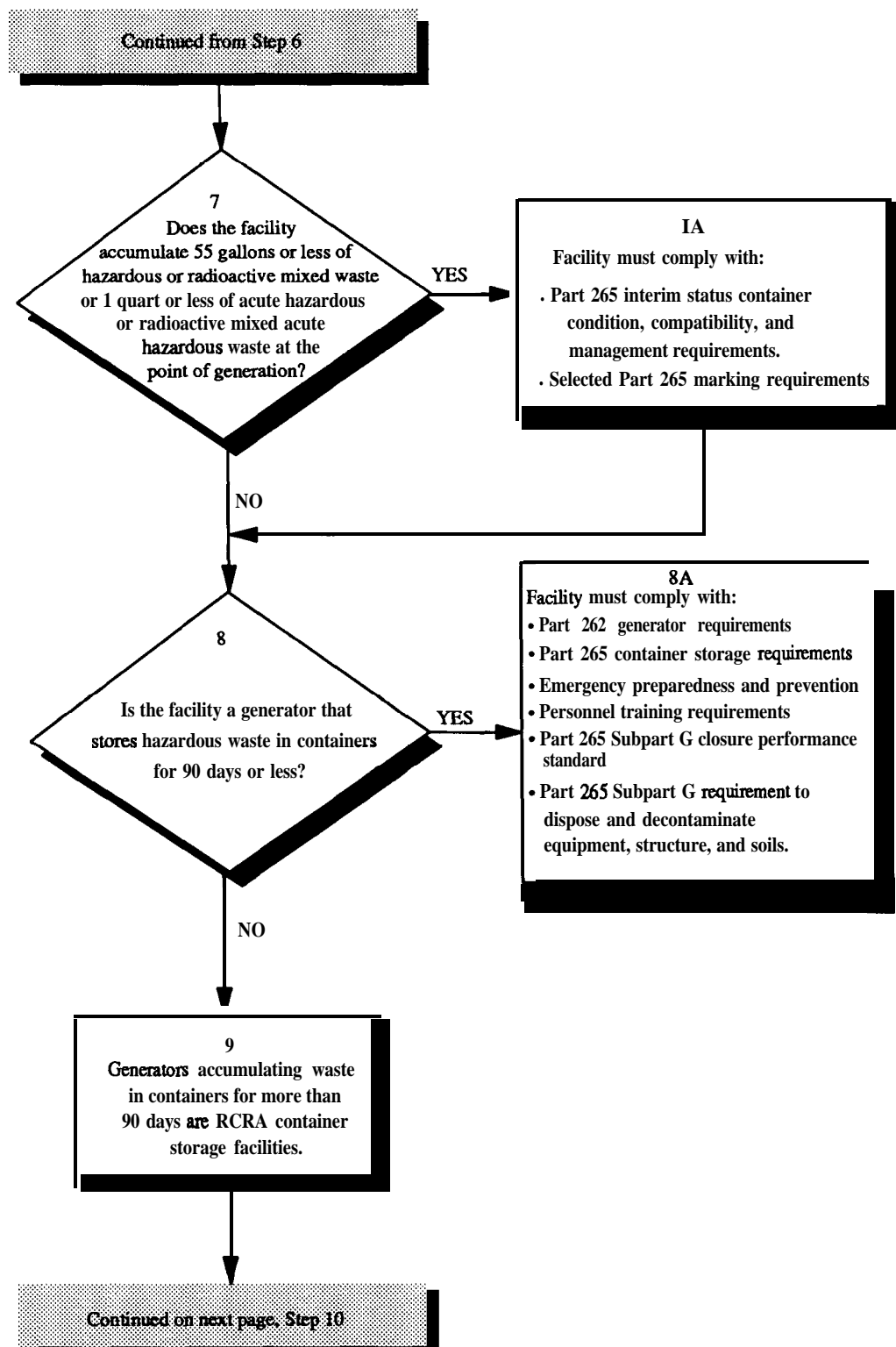
If a State has RCRA base program authorization, but is not authorized for radioactive mixed waste, the hazardous component of such waste is not regulated under RCRA (51 FR 24504). However, the hazardous component could still be subject to State requirements, if any separate requirements exist. In addition, after September 25, 1990, radioactive mixed waste that exhibits the toxicity characteristic (TC) is regulated under RCRA, regardless of the authorization status of the State. The TC regulations were promulgated in response to HSWA requirements. HSWA also specified that EPA Regions must implement all HSWA requirements in States that are not authorized. Regardless of any considerations of State authorization, proper handling of containers of radioactive mixed waste in States without mixed waste authorization is good management practice.

Step 3 DOE facilities that generate less than 100 kilograms of hazardous waste or radioactive mixed waste or 1 kilogram of acute hazardous waste or radioactive mixed waste in a calendar month are considered conditionally exempt small quantity generators and are subject to a minimum number of generator requirements (40 CFR 264.5(b)). However, managing all hazardous waste or radioactive mixed waste in accordance with substantive RCRA requirements, regardless of whether facility threshold quantities have been exceeded, is good management practice.

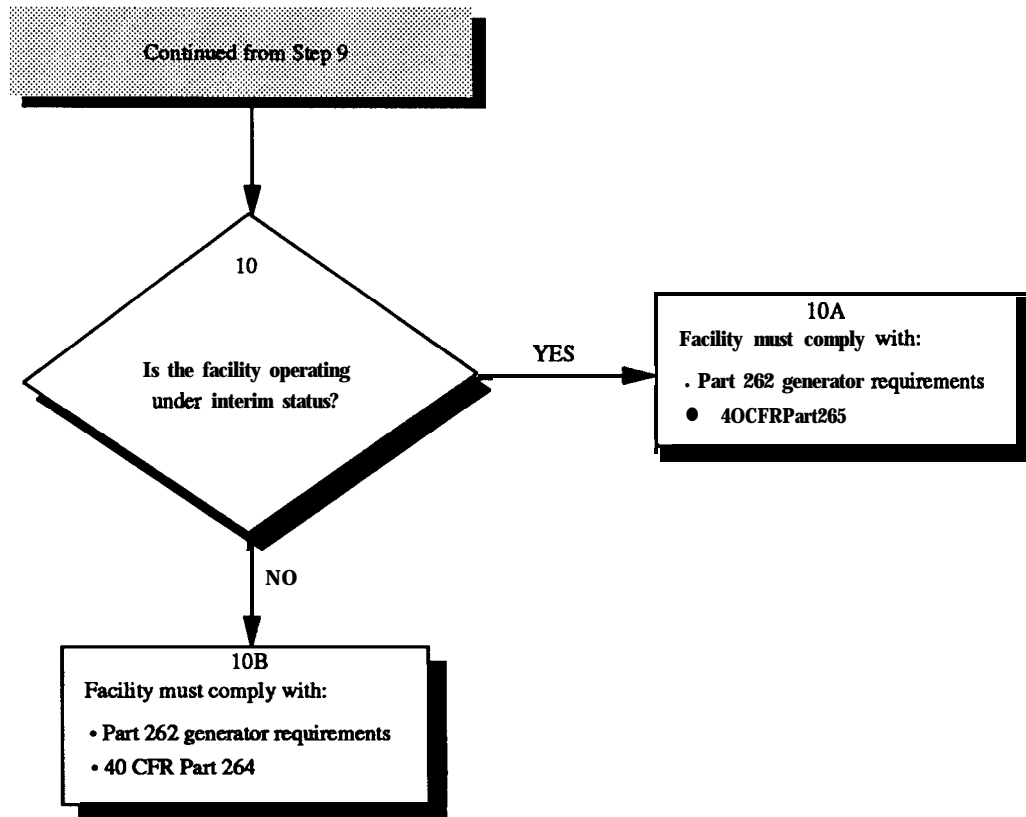
Step 3A Conditionally exempt small quantity generators must meet the hazardous waste determination requirements of 40 CFR 262.11, and must dispose of the waste on-site, or off-site at: a permitted or interim status TSDF; a State permitted, licensed, or registered municipal or industrial solid waste facility; or a recycling facility (40 CFR 261.5(f)(3)). If more than 1,000 kilograms of hazardous waste, or 1 kilogram of acute hazardous waste or 100 kilograms of any residue resulting from the cleanup of an acute hazardous waste are accumulated on-site, waste management personnel must comply with the provisions of Part 262 for generators of between 100 kg and 1000 kg of hazardous waste, requirements in 40 CFR Parts 263 - 266, land disposal restrictions in 40 CFR Part 268, and notification and permitting requirements (40 CFR 261.5(e)).



Step 4	If a facility generates more than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month, it is considered a small quantity generator and may, without obtaining a RCRA permit or interim status, 1) accumulate hazardous waste on-site in containers for 180 days or less, or 2) for 270 days if the waste must be transported a distance exceeding 200 miles. The total quantity of waste accumulated must not exceed 6,000 kilograms (40 CFR 262.34(d)). DOE may request an extension of up to 30 days on these periods if unforeseen, temporary, or uncontrollable circumstances arise (40 CFR 262.34(f)).
Step 4A	<p>Waste management personnel at these facilities (40 CFR 262.34(d)) must ensure that:</p> <ul style="list-style-type: none">• the storage area meets the interim status container management requirements of Subpart I of Part 265 (except for special requirements for ignitable or reactive wastes 40 CFR 265.176);• each container is clearly marked with the words "hazardous waste," the container is labeled, and the date when accumulation began is clearly marked and visible;• an emergency coordinator is designated at the facility and emergency information is posted next to the phone(s); and• all waste management employees are familiar with waste handling and emergency procedures and respond as prescribed to all emergency situations.
Step 5	If a facility 1) accumulates hazardous waste for more than 180 days, or 2) stores hazardous wastes for over 270 days if the waste must be transported over a distance exceeding 200 miles, or 3) stores more than 6,000 kilograms of waste, it is considered a storage facility. As a storage facility, the facility is subject to all of the technical requirements of 40 CFR Parts 264 and 265, Subpart I and the permit requirements of 40 CFR Part 270.
Step 6	Generators accumulating in a month more than 1,000 kilograms of hazardous waste or radioactive mixed waste or 1 kilogram of acutely hazardous waste or radioactive mixed waste are defined as large quantity generators.
Step 6A	The facility must comply with all Part 262 generator requirements.



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- Step 7** DOE facilities may accumulate up to 55 gallons of hazardous waste or radioactive mixed waste or one quart of acutely hazardous waste or radioactive mixed waste at or near the point of generation without a permit or interim status. An area used in this way is termed a satellite accumulation area. If a DOE facility exceeds the satellite accumulation area limits, it must, within three days, manage the excess accumulation in accordance with the 90-day storage requirements.
- Step 7A** Waste accumulated at a satellite accumulation area must be stored in containers that are properly marked, in good condition, and not reactive with the waste. These containers must be closed at all times, except when adding or removing waste, and they must not be opened in any way that would damage the container. Consult submodules 3.2, 3.3, and 3.6.
- Step 8** Generators (excluding conditionally exempt small quantity generators and 100 to 1000 kg per month generators) that store hazardous waste or radioactive mixed wastes in containers for 90 days or less are subject to all generator requirements (40 CFR 262.34), but are not subject to all the permitting or interim status requirements. If a DOE facility accumulates hazardous waste for more than 90 days it is considered a storage facility and subject to all of the requirements of 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270. Waste management personnel may request an extension of up to 30 days on this 90 day period if unforeseen, temporary, or uncontrollable circumstances arise.
- Step 8A** Generators must ensure that all containers are clearly marked and labeled and list the date when accumulation began. In addition, waste management personnel must be trained in accordance with 265.16 and also comply with the emergency preparedness and response requirements of Subparts C and D of Part 265. These facilities must also comply with the interim status container storage area requirements of 40 CFR 265 Subpart I, as well as the closure performance standard of 265.111, the decontamination or disposal procedures for equipment, structures and soils of §265.114, and air emission standards of [40 CFR 265 Subpart CC](#) (For more information, see *OSHA Training Requirements for Hazardous Waste Operations*, U.S. Department of Energy, Office of Environment, Safety, and Health, RCRA/CERCLA Division, Guidance Manual, DOE/EH-0227P, December 1991).
- Step 9** A generator who accumulates hazardous wastes or radioactive mixed wastes for more than 90 days is an operator of a storage facility, and is therefore subject to the requirements of 40 CFR Parts 264 and 265 "Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities" for permitted and interim status facilities respectively, and the permit requirements of 40 CFR Part 270 unless he has been granted an extension to the 90-day period. Such extensions are granted by the EPA if hazardous wastes or radioactive mixed wastes must remain on-site for more than 90 days due to unforeseen, temporary, and uncontrollable circumstances.



Step 10

To qualify for interim status a facility must (40 CFR 270.70):

- have been treating, storing, or disposing of the hazardous waste, or commenced facility construction on or before November 19, 1980 or were in existence on the effective date of statutory or regulatory amendments under the Act that rendered the facility subject to the requirement to have a RCRA permit; and
- comply with the RCRA Section 3010 notification requirements; and
- apply for a permit under 40 CFR Part 270. The Part 265 interim status regulations must be met until a final administrative disposition of the permit application is made.

Step 10A

Facilities that qualify for interim status must comply with the hazardous waste management requirements of 40 CFR Part 265. DOE facilities that generate hazardous waste and treat, store, or dispose of it on-site are subject to Part 262 generator requirements.

Step 10B

Facilities that receive a permit, or are already operating under a permit, must comply with the requirements of Part 264. If the facility generates hazardous waste, waste management personnel must ensure it complies with generator requirements, as outlined in Step 10a.

REFERENCES FOR MODULE 1

- 1) *Definitions of Solid and Hazardous Wastes under RCRA*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, Graphic Guidance Document, (forthcoming).
- 2) *Managing and Tracking Medical Wastes - A Guide to the Federal Program for Generators*, U.S. Environmental Protection Agency, EPA 530-SW-89-021, September 1989.
- 3) *Managing and Tracking Medical Wastes - A Guide to the Federal Program for Treatment, Destruction, and Disposal Facilities*, U.S. Environmental Protection Agency, EPA 530-SW-89-023, September 1989.
- 4) *Managing and Tracking Medical Wastes - A Guide to the Federal Program for Transporters*, U.S. Environmental Protection Agency, EPA 530-SW-89-022, September 1989.
- 5) *Graphic Guidance on Management of PCBs*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, January 1992.
- 6) *Guidance on Management of Asbestos*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, (forthcoming).
- 7) *Hazardous and Radioactive Mixed Waste Programs*, U.S. Department of Energy, DOE Order 5400.3, February 22, 1989.
- 8) *Radioactive Waste Management*, U.S. Department of Energy, DOE Order 5820.2A, September 26, 1989.
- 9) *Radiation Protection for Occupational Workers*, U.S. Department of Energy, DOE Order 5480.11, July 20, 1989.
- 10) *Radiation Protection of the Public and the Environment*, U.S. Department of Energy, DOE Order 5400.5, February 8, 1990.
- 11) *Requirements for the Recycling of Hazardous Wastes*, U.S. Department of Energy, Office of Environmental Guidance, RCRA/CERCLA Division, Information Brief, EH-231-001/0990, September 1990.
- 12) *RCRA Subpart CC Organic Air Emission Standards Containers*, U.S. Department of Energy, Office of Environment, Safety, and Health, RCRA/CERCLA Division, Information Brief, DOE/EH-413-9806, April 1998.
- 13) *Organic Air Emission Standards; Revised Final Rule Issued*, U.S. Department of Energy, Office of Environment, Safety, and Health, RCRA/CERCLA Division, RCRA Regulatory Bulletin, September 1997
- 14) *OSHA Training Requirements for Hazardous Waste Operations*, U.S. Department of Energy, Office of Environment, Safety, and Health, RCRA/CERCLA Division, Guidance Manual, DOE/EH-0227P, December 1991.

REFERENCES FOR MODULE 1 (cont.)

- 15) 40 CFR 260 Appendix I -- Overview of Subtitle C Regulations (i.e., Definition of Solid and Hazardous Wastes).
- 16) 40 CFR 261.7 -- Residues of hazardous waste in empty containers.
- 17) 40 CFR 261.33(c) -- Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.
- 18) 40 CFR 262.10 -- Purpose, scope, and applicability of generator requirements.
- 19) 40 CFR 262.34 -- Accumulation time.
- 20) 40 CFR 264.1 -- Purpose, scope, and applicability of TSDF requirements.
- 21) 40 CFR 264 and 265 Subpart I -- Use and management of containers.
- 22) 40 CFR 264 and 265 Subpart CC -- Air emission standards for tanks, surface impoundments, and containers

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